413

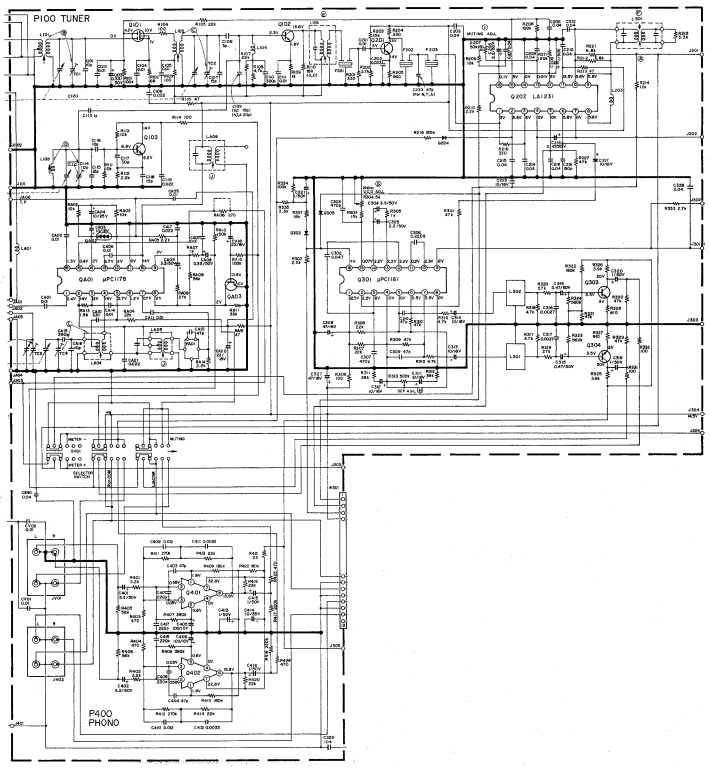
SERVICE MANUAL SR2000

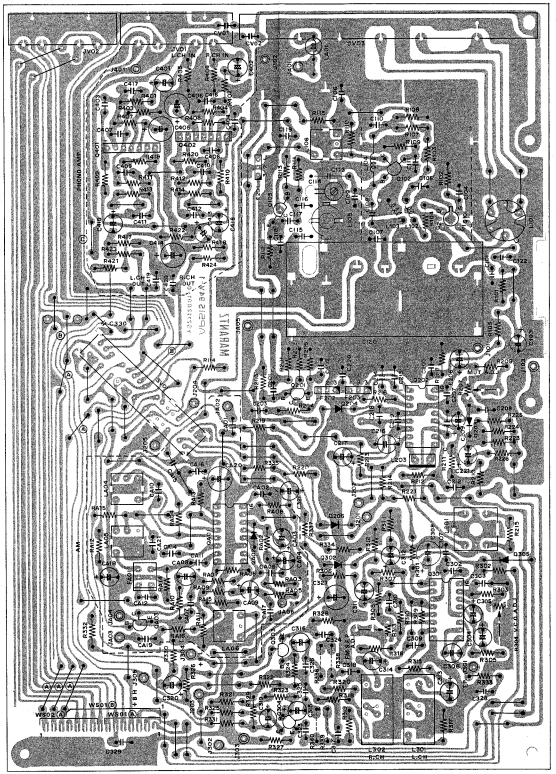
marantz

model SR2000

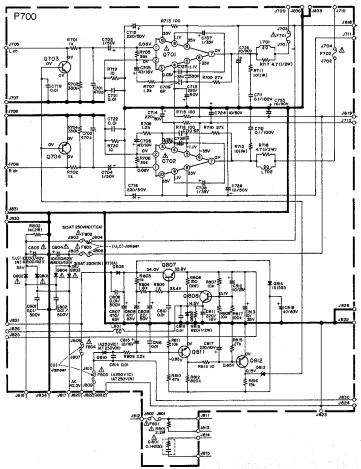
Stereophonic Receiver

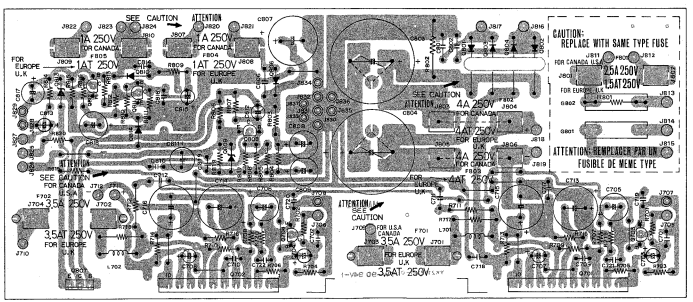
7.2 TUNER BOARD SCHEMATIC DIAGRAM AND COMPONENT LOCATIONS – P100



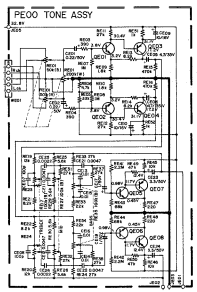


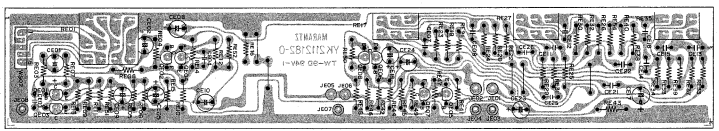
7.3 MAIN AMP/POWER SUPPLY BOARD SCHEMATIC DIAGRAM AND COMPONENT LOCATIONS – P700



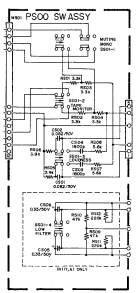


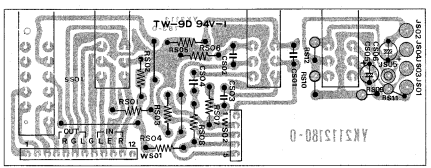
7.4 TONE AMP BOARD SCHEMATIC DIAGRAM AND COMPONENT LOCATIONS – PE00



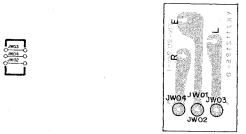


7.5 PUSHSWITCH BOARD SCHEMATIC DIAGRAM AND COMPONENT LOCATIONS – PS00

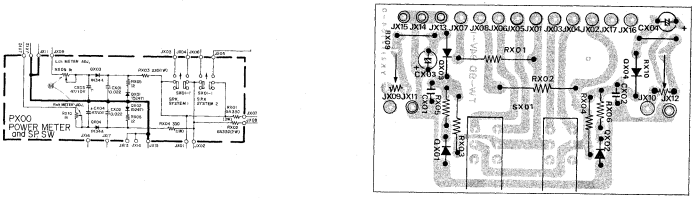




7.6 HEADPHONE JACK BOARD SCHEMATIC DIAGRAM AND COMPONENT LOCATIONS – PW00

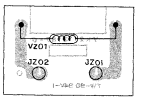


7.7 POWER METER/SPEAKER SWITCH BOARD SCHEMATIC DIAGRAM AND COMPONENT LOCATIONS – PX00

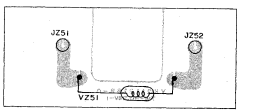


7.8 STEREO LED BOARD SCHEMATIC DIAGRAM AND COMPONENT LOCATIONS – PY00

7.9 DIAL POINTER LAMP BOARD SCHEMATIC DIAGRAM AND COMPONENT LOCATIONS – PZ00

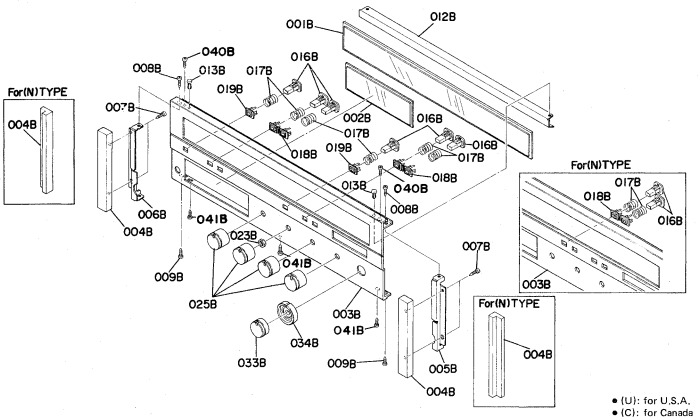


7.10 TUNING METER LAMP BOARD SCHEMATIC DIAGRAM AND COMPONENT LOCATIONS – PZ50



8. EXPLODED VIEWS AND PARTS LIST

8.1 [C01-99] FRONT PANEL



• (U): for U.S.A.
• (C): for Canada
• (N): for Europe

REF. DESIG.	Q'TY U	C	N	PART NO.	DESCRIPTION
A	1	1		2112063400	Front Panel Assembly
A1			1	2112063410	Front Panel Assembly
001B	1	1	1	2112158110	Window, Dial
002B	1	1	1	2112158120	Window, Meter
003B	1	1		2112063010	Escutcheon
003B			1	2112063110	Escutcheon, Low Filter
004B	2	2		2112063040	Escutcheon, Wood
004B			2	2112063050	Escutcheon, AL
005B	1	1	1	2112160020	Bracket (R)
006B	1	1	1	2112160030	Bracket (L)
007B	4	4		51400310A0	B.H. Tapped Screw B3 x 10
007B			4	5128030680	B.H. Tapped Screw B3 x 6
008B	2	2	2	51280308B0	B.H. Tapped Screw B3 x 8
009B	2	2	2	4128030880	B.H. Tapped Screw B3 x 8
012B	1	1	1	2112303010	Mask
013B	2	2	2	2276005050	Clamper
018B	2	2	3	2112259020	Bushing
019B	2	2	1	2112259030	Bushing

REF. DESIG.	Q'TY U	C	N	PART NO.	DESCRIPTION
016B	6	6	7	2112154010	Knob
017B	6	6	7	2112115010	Spring
023B	1	1	1	53118169A0	Hexagon Nut
025B	4	4	4	2112154020	Knob
033B	1	1	1	2112154030	Knob
034B	1	1	1	2112154040	Knob
040B	2	2	2	51100308A9	B.H.M. Screw B3x8
041B	3	3	3	51280308B0	B.H. Tapped Screw B3x8

MARANTZ DESIGN AND SERVICE

Using superior design and selected high grade components, MARANTZ Company has created the ultimate in stereo sound. Only original MARANTZ parts can insure that your MARANTZ product will continue to perform to the specifications for which it is famous.

Parts for your MARANTZ stereo are generally available within 72 hours throughout the nation via a toll-free line to our National Parts Depot in California. The sales professionals who take your call immediately refer to their own desk top computer terminal and can quickly determine the availability and price information you require. If, for some reason, your order should exceed our available stock, we usually can instantly provide an alternate replacement part or current delivery information. When the order is placed and confirmed, the computer simultaneously generates "hard copy" orders at the distribution center. As hard copies come directly from the computer to the national parts depot, your requested stock is assembled and prepared for shipment and placed on the first available carrier for delivery to you.

ORDERING PARTS

Phone orders will eliminate mail delays, and we encourage the use of this method. If you order by mail, use MARANTZ parts order forms which are available from our National Parts Depot located at the following address:

SUPERSCOPE NATIONAL PARTS DEPARTMENT
20525 Nordhoff Street
Chatsworth, California 91311
Phone: 1-800-423-5108
1-213-998-9333

The following information must be supplied to eliminate delays in processing your order:

1. Complete address.
2. Complete part numbers.
3. Complete description of parts.
4. Model number for which part is required (indicate MARANTZ).
5. Account number (for account customers only).

Direct consumers will be provided with the current retail price quotation on available parts in order to advise them of the cost of the parts and shipping.

OVERSEAS PARTS ORDERING

Parts may also be ordered from the following overseas addresses:

CANADA

Superscope Canada, Ltd.
3710 Nashua Drive
Mississauga
Ontario, Canada L4V1M5

AUSTRALIA

Superscope (Australasia) Pty., Ltd.
32 Cross Street (P.O. Box 604)
Brookvale 2100 N.S.W.
Australia

JAPAN

Marantz Japan, Inc.
3622 Kamitsuruma
Sagamihara Shi
Kanagawa, Japan

EUROPE

Superscope Europe, S.A.
Avenue Leopold III, 2
7120 Peronnes-Lez-Binche
Belgium

Marantz France
Rue Louis Armand 9
92600 Asnieres
Hauts-de-Seine
France

Marantz Audio U.K. Ltd.
London Road, 203
Staines
Middlesex
England

Superscope GmbH
Max-Planck-Strasse 22
D-6072 Dreieich 1
West Germany

All of the above locations are fully equipped to take care of your total service needs. Because various countries have differing configuration requirements, it is necessary that you contact the service facility in your particular country. In the event that there is no service location listed for your country, please contact the nearest facility for the necessary assistance.

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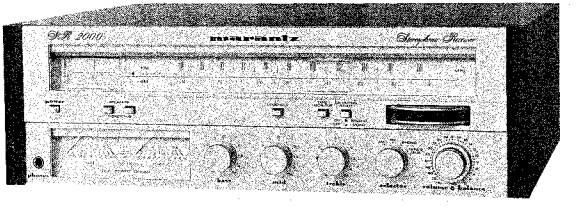
MODEL SR-2000 STEREOPHONIC RECEIVER



INTRODUCTION

This service manual was prepared for use by Authorized Warranty Stations and contains service information for Marantz Model SR-2000 Stereophonic Receiver.

Servicing information and voltage data included in this manual are intended for use by the knowledgeable and experienced technician only. All instructions should be read carefully. No attempt should be made to proceed without a good understanding of the operation of the receiver.

The parts list furnishes information by which replacement parts may be ordered from the Marantz Company. A simple description is included for parts which can usually be obtained through local suppliers.

1. P.W. BOARDS

As can be seen from the circuit diagram the chassis of Model SR-2000 consists of the following units. Each unit mounted on a printed circuit board is described within the square enclosed by a bold dotted line on the circuit diagram.

1. Tuner . . . . . mounted on P.W. Board P100
2. Main Amp/Power Supply . . . . . mounted on P.W. Board P700
3. Tone Amp . . . . . mounted on P.W. Board PE00
4. Pushswitch . . . . . mounted on P.W. Board PS00
5. Headphone Jack . . . . . mounted on P.W. Board PW00
6. Power Meter/Speaker Switch . . . . . mounted on P.W. Board PX00
7. Stereo LED . . . . . mounted on P.W. Board PY00
8. Dial Pointer Lamp . . . . mounted on P.W. Board PZ00
9. Tuning Meter Lamp . . . mounted on P.W. Board PZ50

2. TEST EQUIPMENT REQUIRED FOR SERVICING

This table lists the test equipment required for servicing the Model SR-2000 Receiver.

Item	Manufacturer and Model No.	Use
AM Signal Generator		Signal source for AM alignment
Test Loop		Use with AM Signal Generator
FM Signal Generator MPX Signal Generator	Sound Technology Model 1000A	Signal source for FM alignment Stereo separation alignment and trouble shooting
Distortion Analyzer Audio Oscillator AC VTVM	Sound Technology Model 1700A	Distortion measurements Sinewave and squarewave signal source Voltage measurements (AC)
Oscilloscope	Tektronix Model T932 Philips Model 3232	Waveform analysis and trouble shooting and ASO alignment
Frequency Counter	Fluke Model 1900A	MPX Oscillator adjustment (VCO)
Circuit Tester		Trouble shooting
DC VTVM	Fluke Model 8000 "Digital" Simpson Model 313, Triplet Model 801	Voltage measurements (DC)
AC Wattmeter	Simpson Model 1379	Monitors primary power to amplifier
AC Ammeter	Commercial Grade (1-10A)	Monitors amplifier output under short circuit condition
Line Voltmeter	Simpson Model 1359	Monitors potential of primary power to amplifier
Variable Autotransformer	Superior Electronic Co., Powerstat Model 116B–10A	Adjusts level of primary power to amplifier
Shorting Plug	Use phono plug with 600-ohm across center pin and shell	Shorts amplifier input to eliminate noise pickup
Output Load (8 ohms, ±0.5%, 100W)	Commercial Grade	Provides 8-ohm load for amplifier output termination
Output Load (4 ohms, ±0.5%, 100W)	Commercial Grade	Provides 4-ohm load for amplifier output termination

3. FM ALIGNMENT PROCEDURES

(Selector switch in the FM position)

3.1 TUNING METER ALIGNMENT

1. Set the FM signal generator to no signal.
2. Adjust the secondary core of L201 (Ⓐ) so that the tuning meter may read zero (center position).

NOTE: Place the tuning pointer at 98 MHz adjacency.

3.2 FM TRACKING ALIGNMENT

1. Connect an FM signal generator to the FM antenna terminals and an oscilloscope and an audio distortion analyzer to the TAPE OUT jacks on the rear panel.
2. Set the FM signal generator to 87.3 MHz and provide about 3 to 5 μV. Place the tuning pointer at the low frequency end by rotating the tuning knob and adjust the core of oscillator coil L105 (Ⓓ) to obtain maximum audio output.
3. Set the FM signal generator to 109 MHz and provide about 3 to 5 μV. Rotate the tuning knob and place the tuning pointer at the high frequency end and adjust the trimming capacitor C114 (Ⓓ) for maximum output.

NOTE: Keep the C114 at a half of satisfied capacitance.

4. Repeat steps 2 and 3 until no further adjustment is necessary.
5. Set the FM signal generator to 90 MHz and tune the receiver to the same frequency. Decrease signal generator output until the audio output level decreases with the decreasing generator output. Adjust the antenna coil L101 (Ⓑ), RF coil L103 (Ⓒ) for minimum audio distortion.
6. Set the FM signal generator to 106 MHz and tune the receiver to the same frequency. Adjust the trimming capacitors TC_1 (Ⓑ) and TC_2 (Ⓒ) for minimum distortion.
7. Repeat steps 5 and 6 until no further adjustment is necessary.

3.3 FM IF ALIGNMENT

1. Set the FM signal generator to 98 MHz and increase its usable output level and tune the receiver to the same frequency.
2. The L106 (Ⓔ) should be adjusted for maximum output waveform with decreasing the FM signal generator input level so that the amount of noise should be the same on and beneath the waveform. Readjust the L201 for correct zero point as turning the L106 deviates zero point.

3.4 MONO DISTORTION ALIGNMENT

1. Set the FM signal generator to provide 60 dB at 98 MHz.
2. Set the modulation of FM signal generator to 1 kHz, 100%.
3. Place the tuning meter pointer at the center position.
4. Adjust the primary core (upper) of L201 (Ⓕ) for minimum distortion.

3.5 STEREO DISTORTION ALIGNMENT

1. Set the FM signal generator to provide stereo composite signal and tune the receiver to the same frequency.
2. Adjust the L106 (Ⓔ) for minimum distortion.
3. Repeat the adjustment of L201 so that the tuning meter may read zero.

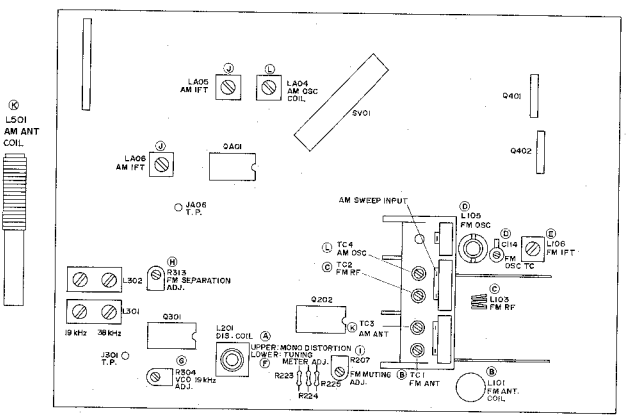


Figure 1. Adjustment Point Locations

3.6 MULTIPLEX ALIGNMENT

1. Connect a frequency counter to test point J301.
2. Set the FM signal generator to provide 60 dB (1 mV) at 98 MHz.
3. Tune the receiver to the same frequency so that the center tuning meter pointer indicates its center.
4. Turn off the modulation of the FM signal generator and adjust the R304 (Ⓖ) so that the frequency counter may a precisely read 19.08 kHz.

3.7 STEREO SEPARATION ALIGNMENT

1. Set the FM signal generator to provide stereo composite signal and tune the receiver to the same frequency so that the center tuning meter pointer indicates its center.
2. Adjust the R313 (Ⓗ) for maximum and same separation in both channels.

3.8 MUTING LEVEL ALIGNMENT

1. Set the FM signal generator to provide 22 dB (12.5 μV) at 98 MHz.
2. Set the modulation of FM signal generator to 1 kHz, 100%.
3. Tune the receiver to the same frequency so that the center tuning meter pointer indicates its center.
4. Turn on FM MUTING pushswitch.
5. Turn the R207 (Ⓘ) until the output waveform disappears and adjust it to a point where the waveform comes to appear again.

4. AM ALIGNMENT PROCEDURES

(Selector switch in the AM position)

4.1 AM IF ALIGNMENT

1. Connect a sweep generator to the tuning capacitor C120 (for AM oscillator) and an alignment scope to the test point JA06.
2. Rotate each core of IF transformers LA05 (Ⓙ) and LA06 (Ⓙ) for maximum height and flat top symmetrical response.

4.2 AM TRACKING ALIGNMENT

1. Set the AM signal generator to 520 kHz. Turn the tuning capacitor fully closed (place the tuning pointer at the low end) and adjust the oscillator coil LA04 (Ⓛ) for maximum audio output.
2. Set the AM signal generator to 1650 kHz. Place the tuning pointer in the high frequency end and adjust the trimming capacitor TC_4 (Ⓛ) for maximum audio output.
3. Repeat steps 1 and 2 until no further adjustment is necessary.
4. Set the AM signal generator to 600 kHz and tune the receiver to the same frequency and adjust a slug core of AM ferrite-rod antenna L051 (Ⓚ) for maximum output.
5. Set the generator to 1400 kHz and tune the receiver to the same frequency and adjust the antenna trimming capacitor TC_3 (Ⓚ) for maximum output.
6. Repeat steps 4 and 5 until no further adjustment is necessary.

NOTE: Use the loop for AM tracking alignment.

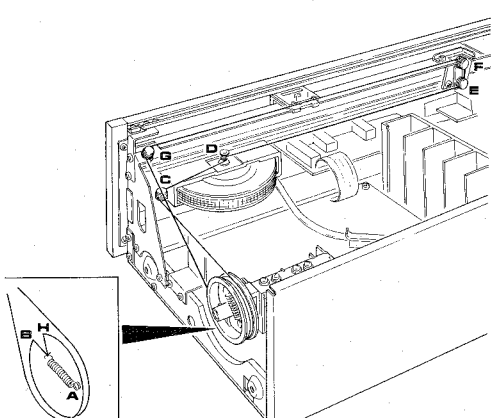


Figure 2. Dial Stringing

5. AUDIO ADJUSTMENT

5.1 VOLTAGE ADJUSTMENT

1. Turn on the POWER pushswitch and connect a DC voltmeter across the J825 and J831.
2. Check that DC voltmeter reading is 32 ± 1 V.

5.2 POWER METER CALIBRATION

Adjust the trimming resistors RX09 (Ⓜ) and RX10 (Ⓜ) so that the power meter reading is 0 dB (30 W) at 1 kHz, 30 W outputs (8 Ω load).

6. VOLTAGE CONVERSION

To convert the unit to a different power source voltage, change the position as illustrated in the drawing below.

CAUTION: DISCONNECT POWER SUPPLY CORD FROM AC OUTLET BEFORE CONVERTING VOLTAGE. DO NOT DISASSEMBLE THE VOLTAGE SELECTOR ABSOLUTELY.

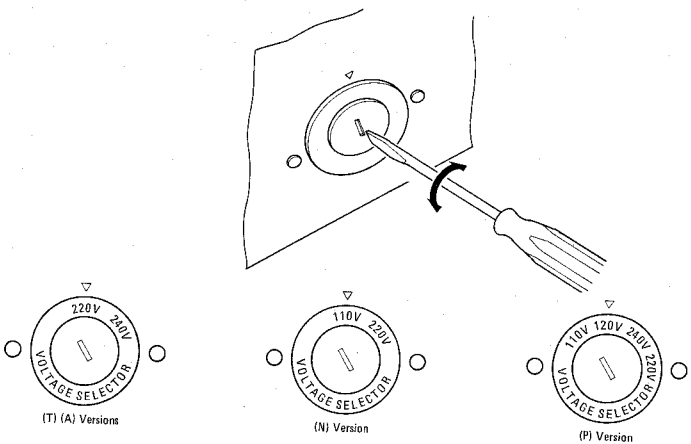


Figure 3. Voltage Conversion

NOTE ON SAFETY: THE PARTS MARKED WITH ⚠ ARE IMPORTANT PARTS ON THE SAFETY. PLEASE USE THE PARTS HAVING THE DESIGNATED PARTS NUMBERS WITHOUT FAIL.

FTZ REGULATION

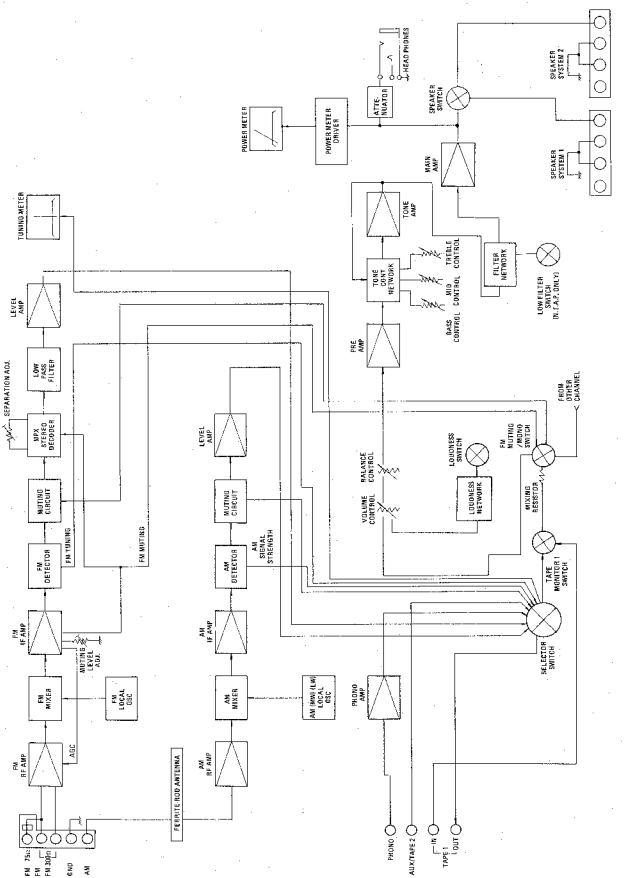
Instruction for the use in the range other than specified in FTZ codes.

Achtung für die Leute, die in dem Gebiet wohnen, wo die FTZ-Bestimmungen vorherrschend sind.

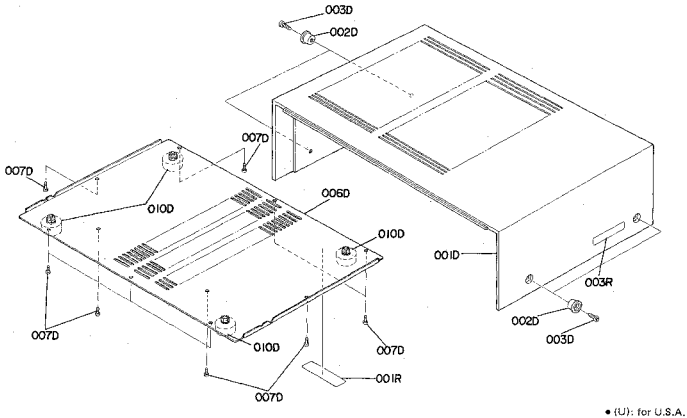
Sollte das Gerät auch für Frequenzen auszerhalb des in den FTZ-Bestimmungen angegebenen Bereiches empfangebereit sein, bitten wir, den Bereich durch Nachstellen des Kernes in der Oszillatorspule (in der Abbildung mit "FTZ" gekennzeichnet) so zu korrigieren, dass er den Bestimmungen entspricht.

7. DIAGRAMS

7.1 BLOCK DIAGRAM



8.2 [C02-99] TOP COVER

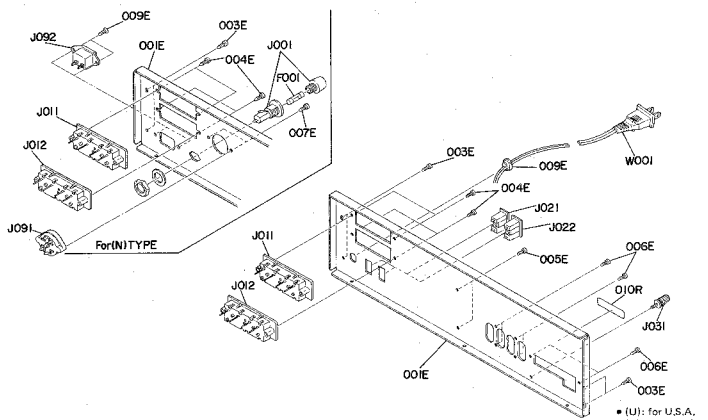


- (U): for U.S.A.
- (C): for Canada
- (N): for Europe

REF. DESIG.	Q'TY U	C	N	PART NO.	DESCRIPTION
001D	1	1	1	2112064012	Case, Wood
002D	4	4	4	3906259010	Bushing
003D	4	4	4	5128041400	B.H. Tapped Screw B4 x 14
006D	1	1	1	2112257022	Lid, Bottom Cover
007D	10	10	10	5128041280	B.H. Tapped Screw B4 x 12
010D	4	4	4	2259057012	Leg

REF. DESIG.	Q'TY U	C	N	PART NO.	DESCRIPTION
001R	1		1	2578861010	Label
001R		1		2911861112	Label
003R	1		1	2932861012	Label
003R		1		2911861143	Label

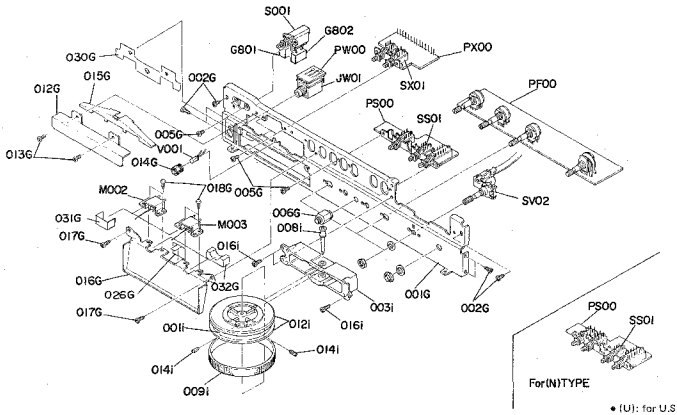
8.3 [C03-99] REAR PANEL



REF. DESIG.	Q'TY U	C	N	PART NO.	DESCRIPTION
001E	1			2112160210	Bracket
001E		1		2112160260	Bracket
001E			1	2112160220	Bracket
003E	4	4	4	51280308U0	B.H. Tapped Screw B3 x 8
004E	4	4	4	51280308U0	B.H. Tapped Screw B3 x 8
005E	2	2	2	51280308U0	B.H. Tapped Screw B3 x 8
006E	6	6	6	51280308U0	B.H. Tapped Screw B3 x 8
007E			2	51280308U0	B.H. Tapped Screw B3 x 8
009E	1	1		1465259030	Bushing
009E			2	51420308T0	O.C.H. Tapped Screw 3 x 8

REF. DESIG.	Q'TY U	C	N	PART NO.	DESCRIPTION
⚠F001			1	FS10125800	Fuse 1.25AT 250V
⚠J001			1	YJ08000290	Jack, Fuse Holder
J011	1	1	1	YT03040170	Terminal, Speaker
J012	1	1	1	YT03040170	Terminal, Speaker
⚠J021	1	1		YJ04000560	Jack, AC Outlet
⚠J022	1	1		YJ04000560	Jack, AC Outlet
⚠J031	1	1	1	YL03010240	Terminal, Ground
⚠J091			1	BY05060010	Plug, Voltage Selector
⚠J092			1	YP04000590	Plug, AC Inlet
⚠W001	1	1		YC02000150	A.C. Power Cord
010R	1	1	1	2112265010	Indicator

8.4 [P01-99] FRONT CHASSIS AND GENERAL PARTS

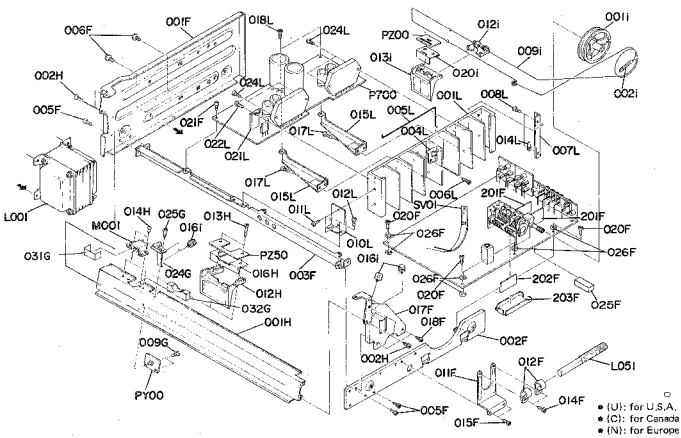


• (U): for U.S.A.
• (C): for Canada
• (N): for Europe

REF. DESIG.	Q'TY U	C	N	PART NO.	DESCRIPTION
001G	1	1	1	2112160010	Bracket, Front Chassis
002G	6	6	6	51280308B0	B.H. Tapped Screw B3 x 8
005G	6	6	6	51100308A9	B.H.M. Screw B3 x 8
006G	1	1	1	2112114010	Stopper
012G	1	1	1	2133303020	Mask
013G	2	2	2	2276005050	Clamper
014G	1	1	1	2417259010	Bushing
015G	1	1	1	2112274030	Reflector
016G	1	1	1	2112302020	Dial, Meter
017G	2	2	2	51280308B0	B.H. Tapped Screw B3 x 8
018G	4	4	4	2276005050	Clamper
026G	1	1	1	2112303040	Mask
030G	1	1	1	2112053020	Cover
031G	2	2	2	2112053010	Cover
032G	2	2	2	2112053030	Cover

REF. DESIG.	Q'TY U	C	N	PART NO.	DESCRIPTION
B	1	1	1	2219273420	Flywheel Assembly
001i	1	1	1	2219273012	Flywheel
009i	1	1	1	2215353010	Ring
012i	2	2	2	2219063030	Escutcheon
014i	2	2	2	5169030609	Socket Screw 3 x 6
003i	1	1	1	2112104500	Retainer
008i	1	1	1	2219112012	Shaft
016i	3	3	3	512803088O	B.H. Tapped Screw B3 x 8
M002	1	1	1	IM11000020	D.C. Meter
M003	1	1	1	IM11000020	D.C. Meter
△S001	1	1		SP01010240	Push Switch, Power
△S001			1	SP02010330	Push Switch, Power
V001	1	1	1	IN10080510	Lamp 100mA 8V
SV02	1	1	1	SR00040040	Rotary Switch
△G801			1	DF17223800	Film Cap. 0.022μF ±20%
△G802			1	DF17223800	Film Cap. 0.022μF ±20%

8.5 [P02-89] CHASSIS AND OTHER PARTS

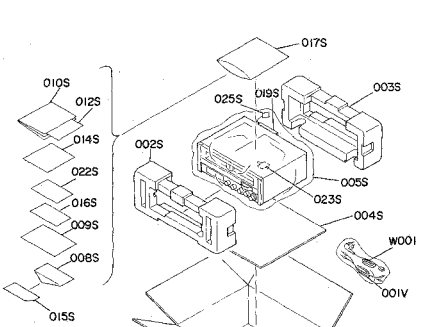


- (U): for U.S.A.
- (C): for Canada
- (N): for Europe

REF. DESIG.	Q'TY U	C	N	PART NO.	DESCRIPTION	
001F	1	1	1	2112105010	Chassis, (L)	
002F	1	1	1	2112105020	Chassis, (R)	
003F	1	1	1	2112126010	Stay	
005F	4	4	4	51283038B0	B.H. Tapped Screw	B3 x 8
006F	4	4	4	51570410B0	P. Taptite Screw	P4 x 10
011F	1	1	1	2112271010	Holder	
012F	2	2	2	1502271010	Holder	
014F	2	2	2	51283010B0	B.H. Tapped Screw	B3 x 10
015F	2	2	2	51283038B0	B.H. Tapped Screw	B3 x 8
017F	1	1	1	2116180050	Bracket	
025F	1	1	1	2116056010	Buffer	
018F	2	2	2	51283038B0	B.H. Tapped Screw	B3 x 8
020F	4	4	4	51283038B0	B.H. Tapped Screw	B3 x 8
021F	1	1	1	51283038B0	B.H. Tapped Screw	B3 x 8
026F	6	6	6	54110099A0	Flat Washer	
032G	1	1	1	2112053030	Cover	
009G	2	2	2	51282605B0	B.H. Tapped Screw	B2.6 x 5
024G	1	1	1	2112160070	Bracket	
025G	1	1	1	51283038B0	B.H. Tapped Screw	B3 x 8
031G	1	1	1	2112053010	Cover	
001H	1	1	1	2112302010	Dial	
002H	4	4	4	51283038B0	B.H. Tapped Screw	B3 x 8
012H	1	1	1	2112274040	Reflector	
013H	2	2	2	51283012B0	B.H. Tapped Screw	B3 x 12
014H	2	2	2	2276005050	Clamper	
016H	1	1	1	2112303050	Mask	
001i	1	1	1	2112159010	Drum	
002i	1	1	1	7112159010	Spring	
009i	1	1	1	72040805A0	String (180)	
012i	1	1	1	2112103010	Pointer	
013i	1	1	1	2112103020	Pointer	
016i	4	4	4	2276262500	Pulley, (K)	
020i	1	1	1	2112303030	Mask	

REF. DESIG.	Q'TY U	C	N	PART NO.	DESCRIPTION	
001L	1	1	1	2112287032	Heatsink	
004L	1	1	1	2112271020	Holder	
005L	1	1	1	2112272010	Pole	
006L	1	1	1	51283038B0	B.H. Tapped Screw	B3 x 8
007L	1	1	1	2112160040	Bracket	
008L	2	2	2	51283038B0	B.H. Tapped Screw	B3 x 8
010L	1	1	1	2276160040	Bracket	
011L	2	2	2	51283038B0	B.H. Tapped Screw	B3 x 8
012L	2	2	2	51283038B0	B.H. Tapped Screw	B3 x 8
014L	1	1	1	62030049W0	Lug	
015L	2	2	2	2112160050	Bracket	
017L	4	4	4	51283038B0	B.H. Tapped Screw	B3 x 8
018L	2	2	2	51283038B0	B.H. Tapped Screw	B3 x 8
021L	1	1	1	2207267020	Heatsink	
022L	1	1	1	51283034B0	B.H. Tapped Screw	B3 x 14
024L	4	4	4	51283016B0	B.H. Tapped Screw	B3 x 16
⚠L001	1			TS17614010	Power Transformer	
⚠L001		1		TS17614020	Power Transformer	
⚠L001			1	TS18612010	Power Transformer	
L051	1			LF11000250	Antenna Coil	
L051		1	1	LF11000240	Antenna Coil	
M001	1	1	1	IM11000010	D.C. Meter	
SV01	1	1	1	SS06040020	Slide Switch	
201F	2	2	2	2259109040	Shield	
202F	1	1	1	2259109062	Shield	
203F	1	1	1	2112109010	Shield	

8.6 [H01-99] PACKING MATERIALS



• (U): for U.S.A.
• (C): for Canada
• (N): for Europe

REF. DESIG.	Q'TY U	Q'TY C	Q'TY N	PART NO.	DESCRIPTION
001S	1		1	2112801010	Packing Case
001S		1		2112801150	Packing Case
002S	1	1	1	2112809010	Cushion
003S	1	1	1	2112809020	Cushion
004S	1	1	1	2918107180	Sheet
005S	1	1	1	9090909040	Polyethy Sheet
006S	3			9526019010	Serial NO. Card
006S		3		9226019020	Serial NO. Card
006S			3	9526019060	Serial NO. Card
008S		1		2818813012	Envelope
008S			1	2818813010	Envelope
009S	1			2818854026	Guarantee Card
009S		1		2818854042	Guarantee Card
010S	1			2112851010	Instructions
010S		1	1	2112851310	Instructions
012S	1			2112851020	Instructions
012S		1		2112851050	Instructions
012S			1	2112851030	Instructions

REF. DESIG.	Q'TY U	Q'TY C	Q'TY N	PART NO.	DESCRIPTION
014S	1			2225813010	Envelope
014S			1	2112856010	Circuit Diagram
015S		1	1	9630000180	Guarantee Card
016S		1		9650000053	S. Station Card
017S	1	1	1	9013025010	Polyethy Bag
019S	1	1	1	2864804010	Sleeve
022S		1		2886851100	Instruction
023S			1	2731821010	Silicagel
024S		2		9510901020	Label
026S			1	9560000043	Hang Tag
001V	1	1	1	ZA02000070	EXT. Antenna
W001			1	ZC01805020	A.C. Power Cord

8.7 ELECTRICAL PARTS

• (U): for U.S.A.
• (C): for Canada
• (N): for Europe

REF. DESIG.	Q'TY U	C	N	PART NO.	DESCRIPTION
					P100-TUNER CIRCUIT BOARD
P100	1	1	1	YG21120010	P.W. Board, Tuner
	1	1		ZZ21120010	P.W. Board Assembly
			1	ZZ21128010	P.W. Board Assembly
					P100-CAPACITORS
CA01	1	1	1	DK18103320	Ceramic 0.01μF +80% –20%
CA02	1	1	1	DK18103320	Ceramic 0.01μF +80% –20%
CA03	1	1	1	EA10601690	Elect 10μF 16V
CA04	1	1	1	EA10602530	Elect 10μF 25V
CA05	1	1	1	DK18103320	Ceramic 0.01μF +80% –20%
CA06	1	1	1	DK18103320	Ceramic 0.01μF +80% –20%
CA07	1	1	1	DF17103300	Film 0.01μF ±20%
CA08	1	1	1	EA33405090	Elect 0.33μF ±5% 50V
CA09	1	1	1	EA33505090	Elect 3.3μF 50V
CA10	1	1	1	DK18103320	Ceramic 0.01μF +80% –20%
CA11	1	1	1	DK18103320	Ceramic 0.01μF +80% –20%
CA12	1	1	1	DD15470370	Ceramic 47pF ±5%
CA14	1	1	1	DK18103320	Ceramic 0.01μF +80% –20%
CA15	1	1	1	DF55391090	Film 390pF ±5%
CA16	1	1	1	DD11100370	Ceramic 10pF ±0.5pF
CA17	1	1	1	DK18103320	Ceramic 0.01μF +80% –20%
CA18	1	1	1	EA22601690	Elect 22μF 16V
CA20	1	1	1	EA22601690	Elect 22μF 16V
CA21	1	1	1	DK18223320	Ceramic 0.022μF +80% –20%
CV01	1	1	1	DK18103320	Ceramic 0.01μF +80% –20%
CV02	1	1	1	DK18103320	Ceramic 0.01μF +80% –20%
C101	1	1	1	DD11100300	Ceramic 10pF ±0.5pF
C103	1	1	1	EA33405030	Elect 0.33μF 50V
C104	1	1	1	DK18103320	Ceramic 0.01μF +80% –20%
C105	1	1	1	DK18103320	Ceramic 0.01μF +80% –20%
C106	1	1	1	DK18223320	Ceramic 0.022μF +80% –20%
C107	1	1	1	DD15150300	Ceramic 15pF ±5%
C108	1	1	1	DD10050370	Ceramic 5pF ±0.25pF
C109	1	1	1	DD11100370	Ceramic 10pF ±0.5pF
C110	1	1	1	DD15301360	Ceramic 300pF ±5%
C111	1	1	1	DK18103320	Ceramic 0.01μF +80% –20%
C113	1	1	1	DD10010300	Ceramic 1pF ±0.25pF
C114	1	1	1	CT11000080	Trimming 10pF ±0.5pF
C115	1	1	1	DD15150350	Ceramic 15pF ±5%
C116	1	1	1	DD11100300	Ceramic 10pF ±0.5pF
C117	1	1	1	DD15300300	Ceramic 30pF ±5%
C118	1	1	1	DD15150300	Ceramic 15pF ±5%
C119	1	1	1	DK18223320	Ceramic 0.022μF +80% –20%
C120	1	1	1	CA32400100	Variable, FM-3, AM-2
C122	1	1	1	DK18103320	Ceramic 0.01μF +80% –20%
C201	1	1	1	DK18103320	Ceramic 0.01μF +80% –20%
C202	1	1	1	DK18223320	Ceramic 0.022μF +80% –20%
C203	1	1	1	DK18403320	Ceramic 0.04μF +80% –20%
C205	1	1	1	DK18403320	Ceramic 0.04μF +80% –20%
C206	1	1	1	EA22505030	Elect 2.2μF 50V
C207	1	1	1	DK18403320	Ceramic 0.04μF +80% –20%
C208	1	1	1	DK18403320	Ceramic 0.04μF +80% –20%
C209	1	1	1	EA10505090	Elect 1μF 50V
C210	1	1	1	DK18403320	Ceramic 0.04μF +80% –20%
C212	1	1	1	DK18403320	Ceramic 0.04μF +80% –20%

REF. DESIG.	Q'TY U	C	N	PART NO.	DESCRIPTION
C213	1	1	1	EA47405030	Elect 0.47μF 50V
C214	1	1	1	DK18403320	Ceramic 0.04μF +80% –20%
C215	1	1	1	DK18403320	Ceramic 0.04μF +80% –20%
C216	1	1	1	EA47405030	Elect 0.47μF 50V
C217	1	1	1	EA10601690	Elect 10μF 16V
C218	1	1	1	EA10505090	Elect 1μF 50V
C219	1	1	1	DD15330370	Ceramic 33pF ±5%
C302	1	1	1	DF17473300	Film 0.047μF ±20%
C303	1	1	1	DF55471090	Film 470pF ±5%
C304	1	1	1	EA33505090	Elect 3.3μF 50V
C305	1	1	1	EA22505030	Elect 2.2μF 50V
C306	1	1	1	EQ22405010	Elect 0.22μF ±20%
C307	1	1	1	DD15471360	Ceramic 470pF ±5%
C308	1	1	1	EA47601890	Elect 47μF 16V
C309	1	1	1	DD15470370	Ceramic 47pF ±5%
C310	1	1	1	DD15470370	Ceramic 47pF ±5%
C311	1	1	1	EA10601690	Elect 10μF 16V
C312	1	1	1	EA10601690	Elect 10μF 16V
C313	1	1	1	EA10602530	Elect 10μF 25V
C314	1	1	1	EA10601690	Elect 10μF 16V
C315	1	1	1	EA47405030	Elect 0.47μF 50V
C316	1	1	1	EA47405030	Elect 0.47μF 50V
C317	1	1		DF16272300	Film 2700pF ±10%
C317			1	DF16182300	Film 1800pF ±10%
C318	1	1		DF16272300	Film 2700pF ±10%
C318			1	DF16182300	Film 1800pF ±10%
C319	1	1	1	EA10505030	Elect 1μF 50V
C320	1	1	1	EA10505090	Elect 1μF 50V
C327	1	1	1	EA47601690	Elect 47μF 16V
C328	1	1	1	DK18403320	Ceramic 0.04μF +80% –20%
C329	1	1	1	DK18403320	Ceramic 0.04μF +80% –20%
C330	1	1	1	DK18403320	Ceramic 0.04μF +80% –20%
C401	1	1	1	EA33505030	Elect 3.3μF 50V
C402	1	1	1	EA33505030	Elect 3.3μF 50V
C403	1	1	1	DD15470370	Ceramic 47pF ±5%
C404	1	1	1	DD15470370	Ceramic 47pF ±5%
C405	1	1	1	EA10701090	Elect 100μF 10V
C406	1	1	1	EA10701090	Elect 100μF 10V
C407	1	1	1	DK16221300	Ceramic 220pF ±5%
C408	1	1	1	DK16221300	Ceramic 220pF ±5%
C409	1	1	1	DF16123300	Film 0.012μF ±10%
C410	1	1	1	DF16123300	Film 0.012μF ±10%
C411	1	1	1	DF16332300	Film 0.0033μF ±10%
C412	1	1	1	DF16332300	Film 0.0033μF ±10%
C413	1	1	1	EA10505090	Elect 1μF 50V
C414	1	1	1	EA10603590	Elect 10μF 35V
C415	1	1	1	EA10505030	Elect 1μF 50V
C416	1	1	1	EA10505030	Elect 1μF 50V
C417	1	1	1	DD15220370	Ceramic 22pF ±5%
C418	1	1	1	DD15220370	Ceramic 22pF ±5%
C419	1	1	1	DK17332300	Ceramic 0.0033μF ±20%
C420	1	1	1	DK17332300	Ceramic 0.0033μF ±20%
C321	1	1	1	EA10505030	Elect 1μF 50V

• (U): for U.S.A.
• (C): for Canada
• (N): for Europe

REF. DESIG.	Q'TY U	C	N	PART NO.	DESCRIPTION
					P100-RESISTORS
					(All Resistors are ±5% and ¼W)
RA02	1	1	1	GD05103140	10KΩ
RA03	1	1	1	GD05103140	10KΩ
RA04	1	1	1	GD05223140	22KΩ
RA05	1	1	1	GD05222140	2.2KΩ
RA06	1	1	1	GD05271140	270Ω
RA07	1	1	1	GD05102140	1KΩ
RA08	1	1	1	GD05563140	56KΩ
RA09	1	1	1	GD05273140	27KΩ
RA10	1	1	1	GD05104140	100KΩ
RA11	1	1	1	GD05333140	33KΩ
RA12	1	1	1	GD05104140	100KΩ
RA13	1	1	1	GD05102140	1KΩ
RA14	1	1	1	GD05222140	2.2KΩ
RA15	1	1	1	GD05470140	47Ω
R101	1	1	1	GD05104140	100KΩ
R102	1	1	1	GD05680140	68Ω
R103	1	1	1	GD05101140	100Ω
R104	1	1	1	GD05101140	100Ω
R105	1	1	1	GD05223140	22KΩ
R107	1	1	1	GD05223140	22KΩ
R108	1	1	1	GD05472140	4.7KΩ
R109	1	1	1	GD05102140	1KΩ
R110	1	1	1	GG05183140	18KΩ
R111	1	1	1	GD05103140	10KΩ
R112	1	1	1	GD05272140	2.7KΩ
R113	1	1	1	GD05103140	10KΩ
R114	1	1	1	GD05101140	100Ω
R115	1	1	1	GG05470140	47Ω
R201	1	1	1	GD05331140	330Ω
R202	1	1	1	GD05272140	2.7KΩ
R203	1	1	1	GD05153140	15KΩ
R204	1	1	1	GD05331140	330Ω
R205	1	1	1	GD05561140	560Ω
R207	1	1	1	RA05030090	50KΩ (B) Trimming
R208	1	1	1	GD05104140	100KΩ
R209	1	1	1	GD05103140	10KΩ
R210	1	1	1	GD05222140	2.2KΩ
R211	1	1	1	GD05124140	120KΩ
R212	1	1	1	GD05682140	6.8KΩ
R213	1	1	1	GG05470140	47Ω
R214	1	1	1	GD05103140	10KΩ
R215	1	1	1	GD05332140	3.3KΩ
R216	1	1	1	GD05331140	330Ω
R219	1	1	1	GD05154140	150KΩ
R221	1	1	1	GD05682140	6.8KΩ
R301	1	1	1	GD05473140	47KΩ
R302	1	1	1	GD05222140	2.2KΩ
R303	1	1	1	GD05153140	15KΩ

REF. DESIG.	Q'TY U	C	N	PART NO.	DESCRIPTION
R304	1	1	1	RA05020160	5KΩ (B) Trimming
R305	1	1	1	GD05102140	1KΩ
R306	1	1	1	GG05101140	100Ω
R307	1	1	1	GD05223140	22KΩ
R308	1	1	1	GD05223140	22KΩ
R309	1	1	1	GD05473140	47KΩ
R310	1	1	1	GD05473140	47KΩ
R311	1	1	1	GD05393140	39KΩ
R312	1	1	1	GD05393140	39KΩ
R313	1	1	1	RA05040090	500KΩ (B) Trimming
R315	1	1	1	GD05472140	4.7KΩ
R316	1	1	1	GD05472140	4.7KΩ
R317	1	1	1	GD05472140	4.7KΩ
R318	1	1	1	GD05472140	4.7KΩ
R319	1	1	1	GD05273140	27KΩ
R320	1	1	1	GD05273140	27KΩ
R321	1	1	1	GD05473140	47KΩ
R322	1	1	1	GD05184140	180KΩ
R323	1	1	1	GD05564140	560KΩ
R324	1	1	1	GD05564140	560KΩ
R325	1	1	1	GD05392140	3.9KΩ
R326	1	1	1	GD05392140	3.9KΩ
R327	1	1	1	GD05102140	1KΩ
R328	1	1	1	GD05102140	1KΩ
R329	1	1	1	GD05473140	47KΩ
R330	1	1	1	GD05473140	47KΩ
R331	1	1	1	GD05101140	100Ω
R332	1	1	1	GD05101140	100Ω
R333	1	1	1	GD05272140	2.7KΩ
R334	1	1	1	GD05104140	100KΩ
R335	1	1	1	GD05332140	3.3KΩ
R337	1	1	1	GD05183140	18KΩ
R401	1	1	1	GD05222140	2.2KΩ
R402	1	1	1	GD05222140	2.2KΩ
R403	1	1	1	GD05471140	470Ω
R404	1	1	1	GD05471140	470Ω
R405	1	1	1	GD05563140	56KΩ
R406	1	1	1	GD05563140	56KΩ
R407	1	1	1	GD05394140	390KΩ
R408	1	1	1	GD05394140	390KΩ
R409	1	1	1	GD05184140	180KΩ
R410	1	1	1	GD05184140	180KΩ
R411	1	1	1	GD05274140	270KΩ
R412	1	1	1	GD05274140	270KΩ
R413	1	1	1	GD05223140	22KΩ
R414	1	1	1	GD05223140	22KΩ
R417	1	1	1	GD05224140	220KΩ
R418	1	1	1	GD05224140	220KΩ
R419	1	1	1	GD05223140	22KΩ
R420	1	1	1	GD05223140	22KΩ
R421	1	1	1	GG05220140	22Ω
R422	1	1	1	GD05184140	180KΩ
R423	1	1	1	GD05471140	470Ω
R424	1	1	1	GD05471140	470Ω

• (U): for U.S.A.
• (C): for Canada
• (N): for Europe

REF. DESIG.	Q'TY U	C	N	PART NO.	DESCRIPTION
					P100-SEMICONDUCTORS
QA01	1	1	1	HC10025060	IC μPC1178C
QA02	1	1	1	HV00006120	Varistor MV-203
QA03	1	1	1	HT32634280	Transistor 2SC2634(S or T)
Q101	1	1	1	HF40045180	F.E.T. 3SK45(B)
Q102	1	1	1	HT31047100	Transistor 2SC1047(C)
Q103	1	1	1	HT30829100	Transistor 2SC829(C)
Q201	1	1	1	HT30829100	Transistor 2SC829(C)
Q202	1	1	1	HC10028030	IC LA1231
Q204	1	1	1	HD20011050	Diode 1S1555
Q301	1	1	1	HC10024060	IC μPC11610
Q302	1	1	1	HD20011050	Diode 1S1555
Q303	1	1	1	HT32634280	Transistor 2SC2634(S or T)
Q304	1	1	1	HT32634280	Transistor 2SC2634(S or T)
Q305	1	1	1	HD20011050	Diode 1S1555
Q401	1	1	1	HC10012060	IC μPC1024H
Q402	1	1	1	HC10012060	IC μPC1024H
					P100-MISCELLANEOUS
FA01	1	1	1	FF10045200	Ceramic Filter 450KHz
F201	1	1	1	FF11070050	Ceramic Filter SFE10.7MD1
F202	1	1	1	FF11070050	Ceramic Filter SFE10.7MD1
F203	1	1	1	FF11070050	Ceramic Filter SFE10.7MD1
JV01	1	1	1	YT02040280	Terminal, RCA Phono/Aux
JV02	1	1	1	YT02040280	Terminal, RCA Tape In/Out
JV03	1	1	1	YT01050010	Terminal, Antenna
LA01	1	1	1	LC11540020	Choke Coil 150μH
LA04	1	1	1	LO10010480	OSC Coil
LA05	1	1	1	LI10010730	I.F.T. 450KHz
LA06	1	1	1	LI10010740	I.F.T. 450KHz
L101	1	1	1	LA12028040	Ant. Coil
L102	1	1	1	LL24800030	Coil
L103	1	1	1	LK11800030	Coil
L104	1	1	1	LC17510010	Choke Coil 0.75μH
L105	1	1	1	LO12036010	OSC Coil
L106	1	1	1	LI10016010	I.F.T.
L201	1	1	1	LI14016240	I.F.T.
L203	1	1	1	LC11830010	Choke Coil 18μH
L301	1	1	1	LS20013010	M.P.X. Coil
L302	1	1	1	LS20013010	M.P.X. Coil
KS00	1	1	1	SR06040130	Rotary Switch, Selector
					P700-MAIN AMP./POWER SUPPLY CIRCUIT BOARD
P700	1	1	1	YK21121810	P.W. Board, Main Amp./ Power Supply
	1			ZZ21121810	P.W. Board Assembly
		1		ZZ21123810	P.W. Board Assembly
			1	ZZ21128810	P.W. Board Assembly
					P700-CAPACITORS
C701	1	1	1	DD15471370	Ceramic 470pF ±5%
C702	1	1	1	DD15471370	Ceramic 470pF ±5%
C703	1	1	1	EA10505030	Elect 1μF 50V
C704	1	1	1	EA10505030	Elect 1μF 50V
C705	1	1	1	EA47601690	Elect 47μF 16V
C706	1	1	1	EA47601690	Elect 47μF 16V
C707	1	1	1	EA10505030	Elect 1μF 50V
C708	1	1	1	EA10505030	Elect 1μF 50V
C709	1	1	1	DD11060370	Ceramic 6pF ±0.5pF
C710	1	1	1	DD11060370	Ceramic 6pF ±0.5pF

REF. DESIG.	Q'TY U	C	N	PART NO.	DESCRIPTION
C711	1	1	1	DF16473540	Film 0.047μF ±10%
C712	1	1	1	DF16473540	Film 0.047μF ±10%
C713	1	1	1	EA22705090	Elect 220μF 50V
C714	1	1	1	EA22705090	Elect 220μF 50V
C715	1	1	1	EA22705090	Elect 220μF 50V
C716	1	1	1	EA22705090	Elect 220μF 50V
C717	1	1	1	DF17104300	Film 0.1μF ±20%
C718	1	1	1	DF17104300	Film 0.1μF ±20%
C719	1	1	1	DK18103320	Ceramic 0.01μF +80% −20%
C720	1	1	1	DK18103320	Ceramic 0.01μF +80% −20%
C801	1	1	1	DK18103510	Ceramic 0.01μF +80% −20%
C802	1	1	1	DK18103510	Ceramic 0.01μF +80% −20%
⚠C803	1	1		EB10904210	Elect 10000μF 42V
⚠C803			1	EB68804210	Elect 6800μF 42V
⚠C804	1	1		EB10904210	Elect 10000μF 42V
⚠C804			1	EB68804210	Elect 6800μF 42V
C806	1	1	1	DK18103510	Ceramic 0.01μF +80% −20%
C807	1	1	1	EA47706390	Elect 470μF 63V
C808	1	1	1	EA47605090	Elect 47μF 50V
C809	1	1	1	EA22605090	Elect 22μF 50V
C810	1	1	1	DK18103320	Ceramic 0.01μF +80% −20%
C811	1	1	1	EA22701690	Elect 220μF 16V
C812	1	1	1	EA10602530	Elect 10μF 25V
C813	1	1	1	EA10603530	Elect 10μF 35V
C814	1	1	1	DK18103320	Ceramic 0.01μF +80% −20%
C815	1	1	1	EA10602530	Elect 10μF 25V
C816	1	1	1	DK18103320	Ceramic 0.01μF +80% −20%
C818	1	1	1	EA47606390	Elect 47μF 63V
C817	1	1	1	EA22701090	Elect 220μF 10V
					P700-RESISTORS (All Resistors are ±5% and ¼W)
R701	1	1	1	GD05102140	1KΩ
R702	1	1	1	GD05102140	1KΩ
R703	1	1	1	GD05334140	330KΩ
R704	1	1	1	GD05334140	330KΩ
R705	1	1	1	GD05393140	39KΩ
R706	1	1	1	GD05393140	39KΩ
R707	1	1	1	GD05122140	1.2KΩ
R708	1	1	1	GD05122140	1.2KΩ
R709	1	1	1	GD05273140	27KΩ
R710	1	1	1	GD05273140	27KΩ
R711	1	1	1	GA05047010	4.7Ω 1W
R712	1	1	1	GA05047010	4.7Ω 1W
R713	1	1	1	GG05101140	100Ω
R714	1	1	1	GG05101140	100Ω
R715	1	1	1	GG05101140	100Ω
R716	1	1	1	GG05101140	100Ω
R717	1	1	1	RC10047120	4.7Ω ±10% ½W
R718	1	1	1	RC10047120	4.7Ω ±10% ½W
R719	1	1	1	GD05100140	10Ω
R720	1	1	1	GD05100140	10Ω

• (U): for U.S.A.
• (C): for Canada
• (N): for Europe

REF. DESIG.	Q'TY U	C	N	PART NO.	DESCRIPTION		
⚠R801	1	1	1	RC10225120	2.2MΩ	±10%	½W
R802	1	1	1	GA05102020	1KΩ		2W
R803	1	1	1	GG05102140	1KΩ		
R804	1	1	1	GG05182140	1.8KΩ		
R805	1	1	1	GG05102140	1KΩ		
R806	1	1	1	GP05151030	150Ω		3W
R807	1	1	1	GD05103140	10KΩ		
R808	1	1	1	GD05822140	8.2KΩ		
R809	1	1	1	GD05222140	2.2KΩ		
R810	1	1	1	GD05473140	47KΩ		
R811	1	1	1	GD05103140	10KΩ		
R812	1	1	1	GD05824140	820KΩ		
R813	1	1	1	GD05100140	10Ω		
R814	1	1	1	GD05272140	2.7KΩ		
R815	1	1	1	GD05273140	27KΩ		
R816	1	1	1	GD05153140	15KΩ		
					P700-SEMICONDUCTORS		
⚠Q701	1	1	1	HC10029030	IC	STK080G	
⚠Q702	1	1	1	HC10029030	IC	STK080G	
Q703	1	1	1	HT326342B0	Transistor	2SC2634(S or T)	
Q704	1	1	1	HT326342B0	Transistor	2SC2634(S or T)	
⚠Q801	1	1	1	HD20009290	Diode	S2V-20	
⚠Q802	1	1	1	HD20009290	Diode	S2V-20	
⚠Q803	1	1	1	HD20009290	Diode	S2V-20	
⚠Q804	1	1	1	HD20009290	Diode	S2V-20	
Q806	1	1	1	HD20005010	Diode	W06B	
Q807	1	1	1	HT40313100	Transistor	2SD313(E)	
Q808	1	1	1	HT326342B0	Transistor	2SC2634(S or T)	
Q809	1	1	1	HD30021090	Zener	BZ-140	
Q810	1	1	1	HD20011050	Diode	1S1555	
Q811	1	1	1	HT326342B0	Transistor	2SC2634(S or T)	
Q812	1	1	1	HT326342B0	Transistor	2SC2634(S or T)	
Q813	1	1	1	HD30029090	Zener	WZ-090	
Q814	1	1	1	HD20011050	Diode	1S1555	
					P700-MISCELLANEOUS		
F701	1	1		FS20350910	Fuse	3.5A	250V
F701			1	FS10350800	Fuse	3.5AT	250V
F702	1	1		FS20350910	Fuse	3.5A	250V
F702			1	FS10350800	Fuse	3.5AT	250V
⚠F801	1			FS10250050	Fuse	2.5A	250V
⚠F801		1		FS10250040	Fuse	2.5A	250V
⚠F802			1	FS10400800	Fuse	3.15AT	250V
⚠F803			1	FS10400800	Fuse	3.15AT	250V
⚠F804		1		FS10100090	Fuse	1A	250V
⚠F804			1	FS10100800	Fuse	1AT	250V
⚠F805		1		FS10100090	Fuse	1A	250V
⚠F805			1	FS10100800	Fuse	1AT	250V
⚠G801	1			BF10400030	Cap. Comp.	0.1μF + 120Ω	
⚠G801		1		BF10400050	Cap. Comp.	0.1μF + 120Ω	

REF. DESIG.	Q'TY U	C	N	PART NO.	DESCRIPTION		
J701							
〃			4	YJ08000270	Jack, Fuse Holder		
J704							
J801	1	1		YJ08000170	Jack, Fuse Holder		
J802	1	1		YJ08000170	Jack, Fuse Holder		
J803							
〃		8		YJ08000170	Jack, Fuse Holder		
J810							
J803							
〃			8	YJ08000270	Jack, Fuse Holder		
J810							
L701	1	1	1	LL23915120	Coil		
L702	1	1	1	LL23915120	Coil		
L801	1	1	1	LC13320050	Choke Coil 3.3μH		
					PE00-TONE AMP. CIRCUIT BOARD		
PE00	1	1	1	YK21121820	P.W. Board, Tone Amp.		
	1	1	1	ZZ21121820	P.W. Board Assembly		
					PE00-CAPACITORS		
CE01	1	1	1	EA22405030	Elect 0.22μF		50V
CE02	1	1	1	EA22405030	Elect 0.22μF		50V
CE03	1	1	1	DD15221370	Ceramic 220pF	±5%	
CE04	1	1	1	DD15221370	Ceramic 220pF	±5%	
CE05	1	1	1	EA47503590	Elect 4.7μF		35V
CE06	1	1	1	EA47503590	Elect 4.7μF		35V
CE07	1	1	1	DD15101370	Ceramic 100pF	±5%	
CE08	1	1	1	DD15101370	Ceramic 100pF	±5%	
CE09	1	1	1	EA10601690	Elect 10μF		16V
CE10	1	1	1	EA10601690	Elect 10μF		16V
CE11	1	1	1	DF17472300	Film 0.0047μF	±20%	
CE12	1	1	1	DF17472300	Film 0.0047μF	±20%	
CE13	1	1	1	DF17103300	Film 0.01μF	±20%	
CE14	1	1	1	DF17103300	Film 0.01μF	±20%	
CE15	1	1	1	DF17103300	Film 0.01μF	±20%	
CE16	1	1	1	DF17103300	Film 0.01μF	±20%	
CE17	1	1	1	EA10505030	Elect 1μF		50V
CE18	1	1	1	EA10505030	Elect 1μF		50V
CE21	1	1	1	DF17472300	Film 0.0047μF	±20%	
CE22	1	1	1	DF17472300	Film 0.0047μF	±20%	
CE23	1	1	1	EA33505030	Elect 3.3μF		50V
CE24	1	1	1	EA33505030	Elect 3.3μF		50V
CE25	1	1	1	DF17222300	Film 0.0022μF	±20%	
CE26	1	1	1	DF17222300	Film 0.0022μF	±20%	

- (U): for U.S.A.
- (C): for Canada
- (N): for Europe

REF. DESIG.	Q'TY U	C	N	PART NO.	DESCRIPTION
					PE00-RESISTORS (All Resistors are ±5% and ¼W)
RE01	1	1	1	RO02040020	50KΩ(B) x 2, 200KΩ Variable
RE03	1	1	1	GD05391140	390Ω
RE04	1	1	1	GD05391140	390Ω
RE05	1	1	1	GD05333140	33KΩ
RE06	1	1	1	GD05472140	4.7KΩ
RE07	1	1	1	GD05105140	1MΩ
RE08	1	1	1	GD05105140	1MΩ
RE09	1	1	1	GD05182140	1.8KΩ
RE10	1	1	1	GD05182140	1.8KΩ
RE11	1	1	1	GD05273140	27KΩ
RE12	1	1	1	GD05273140	27KΩ
RE13	1	1	1	GD05822140	8.2KΩ
RE14	1	1	1	GD05822140	8.2KΩ
RE15	1	1	1	GD05474140	470KΩ
RE16	1	1	1	GD05474140	470KΩ
RE17	1	1	1	RM01040150	100KΩ(B) x 2 Variable
RE19	1	1	1	GD05123140	12KΩ
RE20	1	1	1	GD05123140	12KΩ
RE21	1	1	1	GD05822140	8.2KΩ
RE22	1	1	1	GD05822140	8.2KΩ
RE25	1	1	1	GD05562140	5.6KΩ
RE26	1	1	1	GD05562140	5.6KΩ
RE27	1	1	1	RM01040150	100KΩ(B) x 2 Variable
RE29	1	1	1	GD05562140	5.6KΩ
RE30	1	1	1	GD05562140	5.6KΩ
RE31	1	1	1	GD05273140	27KΩ
RE32	1	1	1	GD05273140	27KΩ
RE33	1	1	1	GD05273140	27KΩ
RE34	1	1	1	GD05273140	27KΩ
RE35	1	1	1	RM01040150	100KΩ(B) x 2 Variable
RE37	1	1	1	GD05273140	27KΩ
RE38	1	1	1	GD05273140	27KΩ
RE41	1	1	1	GD05225140	2.2MΩ
RE42	1	1	1	GD05225140	2.2MΩ
RE43	1	1	1	GD05683140	68KΩ
RE44	1	1	1	GD05683140	68KΩ
RE45	1	1	1	GD05103140	10KΩ
RE46	1	1	1	GD05103140	10KΩ
RE47	1	1	1	GD05221140	220Ω
RE48	1	1	1	GD05221140	220Ω
RE49	1	1	1	GD05473141	47KΩ
RE50	1	1	1	GD05473141	47KΩ
RE51	1	1	1	GD05102140	1KΩ
RE52	1	1	1	GD05102140	1KΩ
RE53	1	1	1	GD05223140	22KΩ
RE54	1	1	1	GD05223140	22KΩ
					PE00-SEMICONDUCTORS
QE01	1	1	1	HT326342B0	Transistor 2SC2634(S or T)
QE02	1	1	1	HT326342B0	Transistor 2SC2634(S or T)
QE03	1	1	1	HT111272B0	Transistor 2SA1127(S or T)
QE04	1	1	1	HT111272B0	Transistor 2SA1127(S or T)
QE05	1	1	1	HT326342B0	Transistor 2SC2634(S or T)
QE06	1	1	1	HT326342B0	Transistor 2SC2634(S or T)
QE07	1	1	1	HT111272B0	Transistor 2SA1127(S or T)
QE08	1	1	1	HT111272B0	Transistor 2SA1127(S or T)

REF. DESIG.	Q'TY U	C	N	PART NO.	DESCRIPTION
					PS00-PUSH SWITCH CIRCUIT BOARD
PS00	1	1	1	YK21121830	P.W. Board, Push Switch
	1	1		ZZ21121830	P.W. Board Assembly
			1	ZZ21127830	P.W. Board Assembly
					PS00-CAPACITORS
CS01	1	1	1	DF17823300	Film 0.082μF ±20%
CS02	1	1	1	DF17823300	Film 0.082μF ±20%
CS03	1	1	1	DF17182300	Film 0.0018μF ±20%
CS04	1	1	1	DF17182300	Film 0.0018μF ±20%
CS05			1	EA33405030	Elect 0.33μF 50V
CS06			1	EA33405030	Elect 0.33μF 50V
					PS00-RESISTORS (All Resistors are ±5% and ¼W)
RS01	1	1	1	GD05332140	3.3KΩ
RS02	1	1	1	GD05332140	3.3KΩ
RS03	1	1	1	GD05332140	3.3KΩ
RS04	1	1	1	GD05332140	3.3KΩ
RS05	1	1	1	GD05392140	3.9KΩ
RS06	1	1	1	GD05392140	3.9KΩ
RS07	1	1	1	GD05562140	5.6KΩ
RS08	1	1	1	GD05562140	5.6KΩ
RS09			1	GD05473140	47KΩ
RS10			1	GD05473140	47KΩ
RS11			1	GD05224140	220KΩ
RS12			1	GD05224140	220KΩ
					PS00-SWITCHES
SS01	1	1		SP04030160	Push Switch
SS01			1	SP04040210	Push Switch
					PW00-HEADPHONE JACK CIRCUIT BOARD
PW00	1	1	1	YK21121850	P.W. Board, Headphone Jack
	1	1	1	ZZ21121850	P.W. Board Assembly
JW01	1	1	1	YJ01001340	Jack, Headphone
					PX00-POWER METER/SPK SW CIRCUIT BOARD
PX00	1	1	1	YK21121840	P.W. Board, Power Meter/SPK SW
	1	1	1	ZZ21121840	P.W. Board Assembly
					PX00-CAPACITORS
CX01	1	1	1	DF17223300	Film 0.022μF ±20%
CX02	1	1	1	DF17223300	Film 0.022μF ±20%
CX03	1	1	1	EA47601090	Elect 47μF 10V
CX04	1	1	1	EA47601090	Elect 47μF 10V

- (U): for U.S.A.
- (C): for Canada
- (N): for Europe

REF. DESIG.	Q'TY U	C	N	PART NO.	DESCRIPTION
					PX00-RESISTORS (All Resistors are ±5% and ¼W)
RX01	1	1	1	GA05331020	330Ω 2W
RX02	1	1	1	GA05331020	330Ω 2W
RX03	1	1	1	GA05331010	330Ω 1W
RX04	1	1	1	GA05331010	330Ω 1W
RX05	1	1	1	GG05120140	12Ω
RX06	1	1	1	GG05120140	12Ω
RX07	1	1	1	GD05271140	270Ω
RX08	1	1	1	GD05271140	270Ω
RX09	1	1	1	RA01020110	1KΩ(B) Trimming
RX10	1	1	1	RA01020110	1KΩ(B) Trimming
					PX00-SEMICONDUCTORS
QX01	1	1	1	HD20003210	Diode 1S2471
QX02	1	1	1	HD20003210	Diode 1S2471
QX03	1	1	1	HD10001010	Diode 1N34A
QX04	1	1	1	HD10001010	Diode 1N34A
					PX00-SWITCH
SX01	1	1	1	SP02020420	Push Switch, Speaker
					PY00-STEREO LED CIRCUIT BOARD
PY00	1	1	1	YK21121860	P.W. Board, Stereo LED
	1	1	1	ZZ21121860	P.W. Board Assembly
RY01	1	1	1	GD05222140	Resistor 2.2KΩ ±5% ¼W
QY01	1	1	1	HI10009020	L.E.D. LN26RP

REF. DESIG.	Q'TY U	C	N	PART NO.	DESCRIPTION
					PZ00-DIAL POINTER LAMP CIRCUIT BOARD
PZ00	1	1	1	YK21121870	P.W. Board, Dial Pointer Lamp
	1	1	1	ZZ21121870	P.W. Board Assembly
VZ01	1	1	1	IN10080460	Lamp 100mA 8V
					PZ50-TUNING METER LAMP CIRCUIT BOARD
PZ50	1	1	1	YK21101880	P.W. Board, Tuning Meter Lamp
	1	1	1	ZZ21101880	P.W. Board Assembly
VZ51	1	1	1	IN10080460	Lamp 100mA 8V

(W01-99)	Assembly and Wiring
(T01-99)	Adjustment
(X01-00)	Correction

9. TECHNICAL SPECIFICATIONS

[FOR U.S.A. & CANADA]

AMPLIFIER SECTION

RATED POWER OUTPUT, MINIMUM CONTINUOUS AVERAGE POWER
PER CHANNEL, BOTH CHANNELS DRIVEN ..... 38 W
POWER BAND ..... 20 Hz to 20 kHz
TOTAL HORMONIC DISTORTION 0.08%
LOAD IMPEDANCE ..... 4 OHMS
RATED POWER OUTPUT, MINIMUM CONTINUOUS AVERAGE POWER
PER CHANNEL, BOTH CHANNELS DRIVEN ..... 30 W
POWER BAND ..... 20 Hz to 20 kHz
TOTAL HARMONIC DISTORTION 0.04%
LOAD IMPEDANCE ..... 8 OHMS

I.M. Distortion
(I.H.F. method, 60 Hz and 7 kHz mixed 4:1 at rated power output)
at 8 ohm load impedance 0.04%
at 4 ohm load impedance 0.08%
Damping Factor (at 20 Hz) 36

PREAMPLIFIER SECTION

Phono
Imput Overload at 1 kHz ..... 110 mV
Equivalent Input Noise ("A" Weighted) ..... 2.5 μV
Dynamic Range
(Dynamic Range is the ratio of input overload to equivalent input noise) ..... 93 dB
Input Sensitivity ..... 2.7 mV
Input Impedance ..... 47 kohms
Input Capacitance ..... 220 pF
Frequency Response, RIAA 20 Hz to 20 kHz ..... ±0.5 dB
Signal-to-Noise Ratio ("A" Weighted)
(at rated output and 10 mV input) ..... 86 dB
High Level (Aux and Tape)
Input Sensitivity ..... 160 mV
Input Impedance ..... 20 kohms
Frequency Response
(includes power amp) ..... 15 Hz to 50 kHz ± 1.0 dB
Signal-to-Noise Ratio ("A" Weighted)
(ref. to rated output and 775 mV input) ..... 98 dB
Output Levels
Tape Out (ref. 10 mV at Phone inputs) ..... 580 mV
Output Impedance
Tape Out ..... 500 ohms

FM TUNER SECTION

Sensitivity
IHF Usable ..... 10.8 dBf (1.9 μV)
IHF 50 dB Quieting (Mono) ..... 14.2 dBf (2.8 μV)
(Stereo) ..... 37.3 dBf (40 μV)
Quieting Slope (Mono)
RF Input for 30 dB Quieting ..... 10.8 dBf (1.9 μV)
Quieting at:
20 dBf (5.5 μV) ..... 55 dB
25 dBf (10 μV) ..... 60 dB
40 dBf (55 μV) ..... 72 dB
65 dBf (1000 μV) ..... 75 dB

Quieting Slope (Stereo)
Quieting at:
30 dBf (17 μV) ..... 40 dB
40 dBf (55 μV) ..... 52 dB
50 dBf (173 μV) ..... 60 dB
65 dBf (1000 μV) ..... 70 dB
Distortion (Mono) at 65 dBf (1000 μV)
100 Hz 0.2%
1000 Hz 0.15%
6000 Hz 0.2%
Distortion (Stereo) at 65 dBf (1000 μV)
100 Hz 0.3%
1000 Hz 0.25%
6000 Hz 0.4%
Frequency Response
30 Hz to 15 kHz
Mono and Stereo ..... +0.5 dB, −1.0 dB
Capture Ratio at 65 dBf (1000 μV) ..... 1.0 dB
Alternate Channel Selectivity ..... 62 dB
Spurious Response Rejection ..... 90 dB
Image Response Rejection ..... 50 dB
I.F. Rejection (Balanced) ..... 90 dB
A.M. Suppression ..... 50 dB
Stereo Separation at 1 kHz ..... 45 dB
Subcarrier Rejection ..... 60 dB

AM TUNER SECTION

IHF Usable Sensitivity ..... 20 μV
Signal-to-Noise Ratio ..... 50 dB
Alternate Channel Selectivity ..... 44 dB
Image Rejection ..... 45 dB
Spurious Response Rejection ..... 55 dB
I.F. Rejection ..... 40 dB

GENERAL

Power Requirements ..... 120 VAC, 60 Hz
Power Consumption at rated output, both channels operating ..... 150 W
Idling Power (Volume Control at zero) ..... 28 W
Dimensions:
Panel Width ..... 466 mm (18-3/8")
Panel Height ..... 140 mm (5-1/2")
Depth ..... 323 mm (12-3/4")
Weight:
Unit alone ..... 8.0 kg (17.6 lbs)
Packed for Shipment ..... 10.5 kg (23.1 lbs)

[FOR EUROPE]

AUDIO SECTION

POWER OUTPUT, DIN, 4 OHM, PER CHANNEL ..... **38 W**
POWER OUTPUT, FTC AMERICAN STANDARDS, 4 OHM, PER CHANNEL ..... **40 W**
TOTAL HARMONIC DISTORTION AT RATED POWER OUTPUT **0.1%**
I.M. DISTORTION AT RATED POWER OUTPUT
(250 Hz AND 8 kHz MIXED, AMPLITUDE RATIO 4:1) **0.1%**
POWER OUTPUT, DIN, 8 OHM, PER CHANNEL ..... **46 W**
POWER OUTPUT, FTC AMERICAN STANDARDS, 8 OHM, PER CHANNEL ..... **30 W**
TOTAL HARMONIC DISTORTION AT RATED POWER OUTPUT **0.05%**
I.M. DISTORTION AT RATED POWER OUTPUT
(250 Hz AND 8 kHz MIXED, AMPLITUDE RATIO 4:1) **0.05%**
POWER BANDWIDTH ..... **10 Hz ~ 40 kHz**

	(40 Hz)	(1 kHz)	(12.5 kHz)
DAMPING FACTOR 8 OHM	55	55	53

Frequency Response
- Phone (RIAA) ..... ±1.0 dB
- Aux (±1 dB) ..... 18 Hz ~ 30 kHz

Signal-to-Noise Ratio
- Phone ..... 70 dB
- Aux ..... 80 dB

Input Terminals
- Phono: Input Impedance ..... 47 k ohms
  - Input Capacitance ..... 100 pF
  - Input Sensitivity ..... 2.7 mV
  - Overload Margin ..... 35 dB
- Aux: Input Impedance ..... 20 k ohms
  - Input Sensitivity ..... 160 mV

Phono Equivalent Input Noise ..... 1.3 μV
Phono Dynamic Range (Ratio of input overload to equivalent input noise) ..... 101 dB
Channel Balance (0 to —40 dB/40 Hz ~ 16 kHz)
- Phono ..... 2.5 dB
- Aux ..... 2.0 dB

Interchannel Crosstalk
- Phono 1 kHz ..... 35 dB
- Aux 1 kHz ..... 50 dB
- Tape 1 kHz ..... 50 dB

Intersource Crosstalk (Worst Point)
- 1 kHz ..... 50 dB

Output Voltage, 1 kHz
- Tape Out ..... 450 mV

Output Impedance, 1 kHz
- Tape Out ..... 500 ohms

Headphone Jack Load Impedance ..... 8 ohms

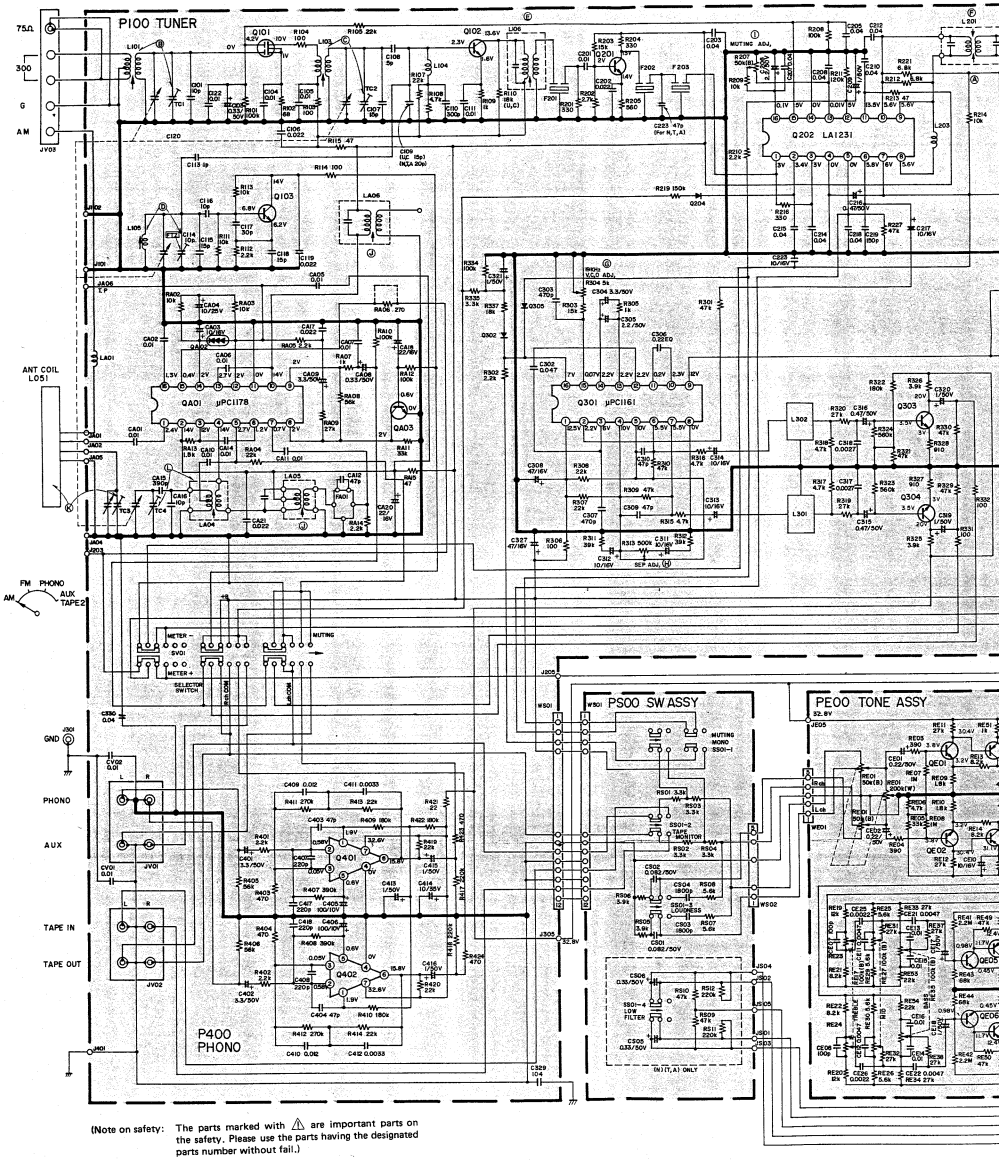
FM TUNER SECTION

Frequency Range ..... 87.5 ~ 108 MHz
Usable Sensitivity 40 kHz Deviation, 98 MHz
- Mono, S/N 26 dB ..... 1.6 μV
- Stereo, S/N 46 dB ..... 44 μV

Alternate Channel Selectivity, 98 MHz±300 kHz ..... 36 dB
Image Response Rejection, 98 MHz ..... 54 dB
IF Rejection, 98 MHz ..... 100 dB
Spurious Response Rejection, 98 MHz ..... 90 dB
AM Suppression, 98 MHz ..... 57 dB

SCHEMATIC DIAGRAM

Q101	Q102	Q103	Q201	Q204,Q302,Q305	Q303, Q304	Q401, Q402	Q701, Q702	Q703, Q704	Q801~Q804	Q806	Q807	Q808, Q811, Q812
3SK45 B	2SC1047 C	2SC829 C	2SC829C	1S1555	2SC2634 S,T	μPC1024H	STK-080G	2SC2634 S or T	S2V-20	W06B	2SD313E	2SC2634 S or T



(Note on safety: The parts marked with ⚠ are important parts on the safety. Please use the parts having the designated parts number without fail.)

Q808, Q811, Q812 2SC2634 S or T | Q809 BZ-140 | Q810, Q814 1S1555 | Q813 WZ-090 | QA02 MV-203 | QA03 2SC2634 S,T | QE01, QE02, QE05, QE06 2SC2634 S or T | QE03, QE04, QE07, QE08 2SA1127 S or T

Authorisierte Vertragswerkstatt
4 SUPERSCOPE
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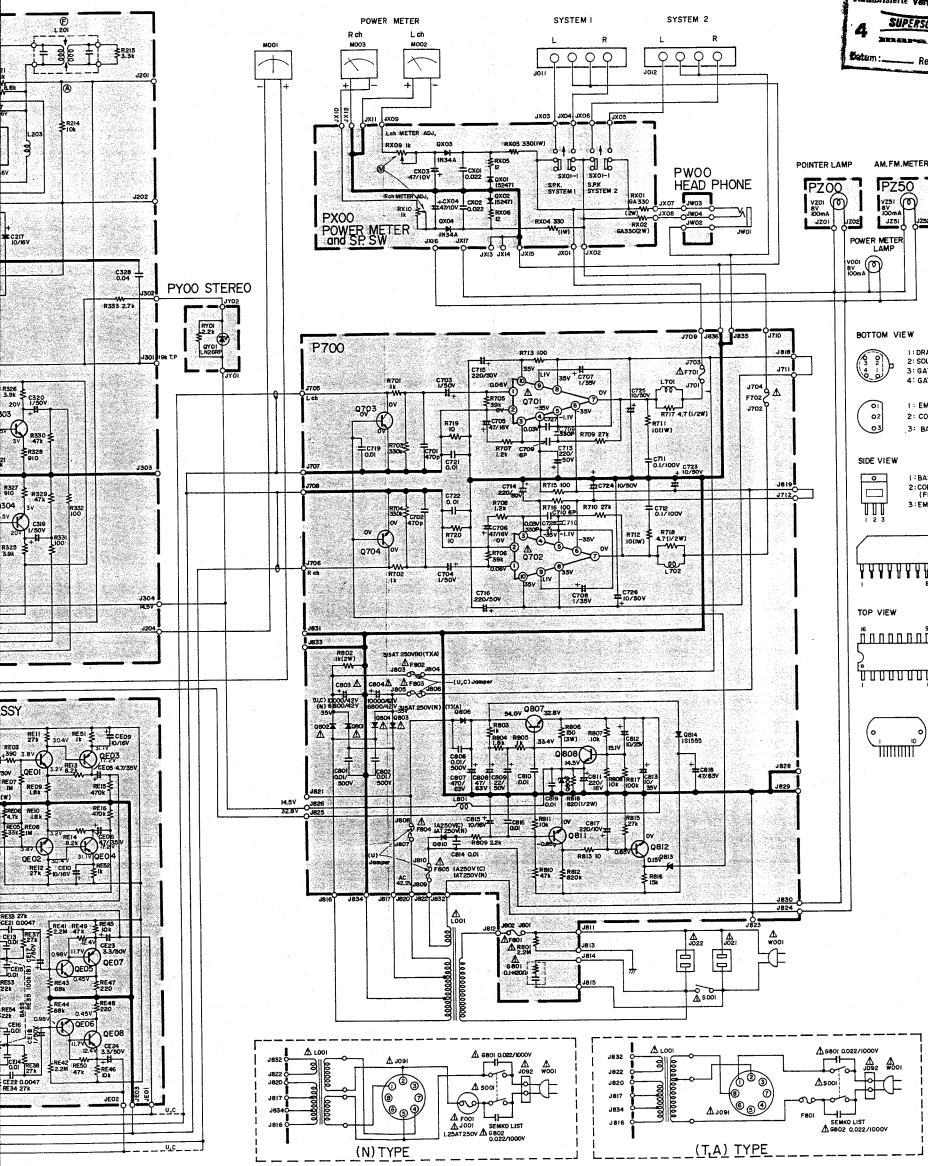

Signal-to-Noise Ratio, 98 MHz	
Unweighted: Mono	72 dB
Stereo	65 dB
Weighted: Mono	62 dB
Stereo	55 dB
Pilot Signal & Subcarrier Rejection	
19 kHz	60 dB
38 kHz	60 dB
Total Harmonic Distortion, 98 MHz	
Mono	0.15%
Stereo	0.25%
Frequency Response	
30 Hz ~ 15 kHz	+0.3 dB, −1.0 dB
Separation	
Stereo	45 dB
Channel Balance	0.5 dB
Output Voltage, 1 kHz	600 mV
Output Impedance, 1 kHz	3 k ohms
Acceptable Load Impedance, 1 kHz	47 k ohms
Antenna Terminals	
Balanced	300 ohms
Unbalanced	75 ohms

AM TUNER SECTION

Frequency Range	515 ~ 1650 kHz
Usable Sensitivity (26 dB S/N 30% Mod., 1 MHz)	20 μV
Selectivity, 1 kHz±9 kHz	24 dB
Image Rejection, 1 MHz	45 dB
IF Rejection, 1 MHz	40 dB
Spurious Response Rejection, 1 MHz	46 dB
Signal-to-Noise Ratio, 1 MHz	44 dB
Frequency Response, 1 MHz±3 dB	35 Hz ~ 1.8 kHz
Total Harmonic Distortion, 1 MHz	0.8%

GENERAL

Power Requirements	220 V AC, 50 Hz
	(N version is featuring an external voltage selector for use on 110 V. Other versions can be converted by a qualified technician to operate on 240 V.)
Power Consumption at Rated Output, Both Channels Operating	160 W
Idling Power	28 W
Semiconductor Complement	
Integrated Circuits	7
Transistors	20
Diodes	16
Field Effect Transistors	1
Dimensions	
Panel Width	18-3/8" (466 mm)
Panel Height	5-1/2" (140 mm)
Depth	12-3/4" (323 mm)
Weight	
Unit alone	17.6 lbs (8.0 kg)
Packed for shipment	23.1 lbs (10.5 kg)

marantz

MARANTZ CO., INC. · P.O. BOX 577 · CHATSWORTH, CALIFORNIA · 91311

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